

REMARKS

Summary

This Amendment is responsive to the Office Action mailed on August 15, 2005. Claims 47 and 82 are amended herein. Claim 48 is cancelled. Claims 47, and 49-92 are pending in this application.

Claims 51-55, 59-79 and 86-92 are withdrawn from consideration. The Examiner has indicated that claims 47-49 and 80-85 are generic. It is Applicants' understanding that upon the allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which are written in dependent or otherwise include all the limitations of a generic claim.

The Examiner has indicated that claims 82-84 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and to include all of the limitations of the base claim and any intervening claims.

The Examiner has rejected claims 82-84 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention. Claim 82 is amended herein to overcome the 35 U.S.C. § 112 rejection, withdrawal of which is respectfully requested.

The Examiner has rejected claims 47, 48, and 56 under 35 U.S.C. §102(b), as being anticipated Bilhorn (US 3,740,270).

The Examiner has rejected claims 47, 48, 56, and 80 under 35 U.S.C. §102(b), as being anticipated by Kilduff (US 3,751,301).

The Examiner has rejected claims 47, 48, 50, and 56 under 35 U.S.C. §102(b), as being anticipated by Sugikawa (US 5,531,955).

The Examiner has rejected claim 49 under 35 U.S.C. §103(a) as being unpatentable over Bilhorn in view of Shirodker (US 3,859,134).

The Examiner has rejected claims 47, 50, 56-58, 80, 81, and 85 under 35 U.S.C. § 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as being unpatentable over Fan (US 6,627,035) in view of either Kilduff or Kilduff and Munshi (US 6,758,868).

The Examiner has rejected claims 47, 48, 50 and 56-58 under 35 U.S.C. § 103(a) as being unpatentable over Door (4,992,126) in view of Munshi.

These rejections are respectfully traversed in view of the amended claims and the following comments.

Discussion of Amended Claims

Claim 47 is amended to include the subject matter of claim 48. Claim 48 is cancelled to avoid duplication of claimed subject matter.

Claim 82 is amended herein in order to overcome the 35 U.S.C. § 112 rejection, withdrawal of which is respectfully requested. In particular, claim 82 is amended to specify that the contact layer is sprayed onto the carrier on a side of the carrier opposite that of the rolled-on reaction layer.

Discussion of Prior Art Rejections

Claim 47 is amended herein to include the subject matter of claim 48. Claim 48 is rejected as being anticipated by Bilhorn, Kilduff, and Sugikawa. Further, claim 48 is rejected as being unpatentable over Door in view of Munshi.

In accordance with Applicants' amended claim 47, at least one additional function layer is produced by spraying on a powder in a dry manner after the first layer is rolled onto the carrier. This at least one additional layer is a function layer.

Bilhorn discloses a duplex electrode which is constructed by first coating both sides of a continuous metal carrier strip with electrically conductive adhesive material and then placing intermittent deposits of positive and negative electrodes on opposite sides of the coated carrier strip (Col. 1, lines 12 to 17). This document is generally silent regarding the details of how the electrodes are produced. In particular, it is not disclosed or suggested that the electrodes are produced by spraying on a powder in a dry manner as claimed by Applicants.

Bilhorn specifies that use of the carrier strip as a substrate permits the electrodes to be made from compositions which are unable or poorly suited to be produced as continuous strips. Examples of such electrodes include electrodes comprising particles of flame spray deposits and

vapor deposits (Col. 4, lines 8 to 18; Fig. 1). Applicant respectfully submits that flame spraying is not equivalent to a spraying on a powder in a dry manner as claimed by Applicants.

Further, Bilhorn states that the pores in the electrode are produced by the evaporation of liquid during the construction of the electrode. The evaporating liquid may be part of a dispersion binder system in which the solid binder contained in the finally constructed electrode is dissolved in the liquid which is later evaporated (Col. 6, lines 35 to 41). Accordingly, the additional layer in Bilhorn is not produced by spraying on a powder in a dry manner as claimed by Applicants.

In addition, Bilhorn indicates that the negative electrodes may comprise spray or vapor deposits of metals (Col. 6, lines 67 to 69). Such spray deposits can only be spray deposits resulting from flame spraying (Col. 4, lines 17 to 18) and do not resulting from spraying on of a powder in a dry manner as claimed by Applicants.

The claims of Bilhorn merely mention in general terms that intermittent deposits of the electrodes are placed along the adhesive coating.

Kilduff discloses that dry lead dioxide particles may be applied to the surface of the active coating in order to reduce the activation time of the battery (Col. 5, lines 33 to 45). The preferred method in Kilduff is to use electrostatic spray coating of the dry particles (Col. 5, lines 43 to 44). Electrostatic spray coating of dry particles is not equivalent to spraying on of a powder in a dry manner as claimed by Applicants.

Sugikawa discloses the jetting of fine metallic powders from a powder jetting device to apply to an organic adhesive agent (Col. 8, lines 12 to 15). Sugikawa does not disclose the spraying on of a powder in a dry manner as claimed by Applicants. In particular, Sugikawa mentions that the powder jetting may lead to non-uniform distribution of the fine metallic powders on the surfaces (Col. 8, lines 24 to 28). Further, the fine metallic powders penetrate into the porous sheet (Col. 8, lines 34 to 36). It appears from the disclosure of Sugikawa that the powder jetting device does not spray on a powder in a dry manner.

Door indicates that a metal powder is applied to a binder-coated foundation layer for example by spraying (Col. 5, lines 22 to 28). It is not disclosed or remotely suggested that the metal powder is sprayed on in a dry manner.

Munshi only mentions in general terms coating methods. The combination of rolling and spraying processes for selectively adjusting the respective layers in a multi-layer electrode is not disclosed or remotely suggested by Munshi. Such a general mentioning of possible processes would not lead a person skilled in the art to the combination process set forth in Applicants' amended claim 47.

Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious to one skilled in the art in view of any of the other prior art of record or any combination thereof.

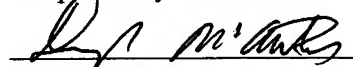
Withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) is therefore respectfully requested.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the amended claims and the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of acquiescence to the stated grounds of rejection.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



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